AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (presently amended) ~~Multistage~~ A multistage centrifugal compressor comprising at least one stage ~~10~~ which, in turn, comprises a lower half-tank ~~11,~~ and an upper half-tank ~~12~~ to contain the at least one stage, a series of lower half-diaphragms ~~16~~, a shaft ~~13~~ equipped with a series of rotors ~~14~~, a series of upper half-diaphragms ~~18~~, a lower suction half-diaphragm ~~51~~, and an upper suction half-diaphragm ~~52~~, ~~characterized in that~~wherein the lower suction half-diaphragm ~~51~~ and the upper suction half-diaphragm ~~52~~ include a lower portion ~~71~~ and ~~a~~ an upper portion ~~72~~, respectively, suitable for being coupled with the lower half-diaphragms ~~16~~ and with the upper half-diaphragms ~~18~~, respectively, to form a first pile ~~41~~ of lower half-diaphragms ~~16~~ and a second pile ~~42~~ of upper half-diaphragms ~~18~~, respectively.

2. (presently amended) The multistage centrifugal compressor according to claim 1, ~~characterized in that~~wherein each of the lower portion and the upper portion is a ~~said~~ shaped cylindrical ~~section 71 comprises~~ form comprising a series of annular housings ~~59~~ suitable for being coupled with ~~lower~~ the lower and the upper half-diaphragms ~~16 and in that said shaped cylindrical section 72 comprises a series of annular housings 60~~ respectively, for balancing the axial stress received during the functioning of the multistage centrifugal compressor.

3. (presently amended) The multistage centrifugal compressor according to claim 1, ~~characterized in that~~wherein each of the lower half-diaphragm and upper half-diaphragm ~~16~~ includes a lower section and an upper section, respectively, ~~81~~ suitable for being respectively coupled with an internal annular housing ~~59~~ of the relative ~~lower~~ suction half-diaphragm ~~51, and in that each upper half-diaphragm 18 includes a section 82 suitable for being respectively coupled with an internal housing 60 of the relative upper suction half-diaphragm 52~~.

4. (presently amended) The multistage centrifugal compressor according to claim 1, ~~characterized in that~~wherein each of the lower suction half-diaphragm and the upper suction half-diaphragm ~~51~~ comprises a series of radial shaped grooves~~61 and, correspondingly, the upper suction half-diaphragm 52 comprises a series of radial shaped grooves 62~~.

5. (presently amended) The multistage centrifugal compressor according to claim 1, ~~characterized in that~~wherein each of the lower suction half-diaphragm and the upper suction half-diaphragm ~~51~~ includes a section with a shaped ~~basis~~base ~~63~~, open at the center~~centre and, correspondingly, the upper suction half-diaphragm 52 includes a section with a shaped basis 64, open at the centre~~.

6. (presently amended) The multistage centrifugal compressor according to claim 1, ~~characterized in that~~wherein the lower suction half-diaphragm ~~51~~ and the upper suction half-diaphragm ~~52~~ respectively include supporting feet to adapt the multistage centrifugal compressor to the configuration with a horizontal opening of the tank.

7. (new) The multistage centrifugal compressor according to claim 1, wherein each of the first pile and the second pile, when combined with the shaft, allow the compressor to be assembled horizontally.